

REMARKS

Status of the Application

Applicants respectfully request reconsideration of the positions set forth in the outstanding Final Office Action mailed August 2, 2004 and the Advisory Action mailed January 12, 2005. Claims 10-24 are pending in the application. Per the Final Office Action mailed August 2, 2004, Claims 10-24 stand as rejected under 35 U.S.C. §103. In the Advisory Action, the Examiner indicated that the amendment submitted in the Response to the Final Office Action mailed January 12, 2004 had been entered and considered but was not deemed persuasive.

Claims 10 and 13 have been amended herein to claim the use of 0 to 10 wt.% of at least one radically polymerizable reactive thinner having olefinically unsaturated groups and having a calculated molar mass of less than 500 to further differentiate the present invention. Support for this amendment is found in the present specification on page 7, lines 25-28. Claims 12 and 15 have been canceled. No new matter has been added.

Rejections under 35 U.S.C. §103

Claims 10, 12, 13, 15, and 19-24 stand as rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,261,645 (Betz et al.) in view of U.S. Patent 4,609,718 (Bishop et al.), which corresponds to EP 204161.

With respect to Betz et al., this reference broadly discloses that the urethane (meth)acrylates disclosed in column 5, lines 47-67, as well as the preferred aliphatic urethane acrylates are produced via the broadly disclosed process (see column 7, lines 47-67 and column 6, lines 3-4). Betz et al. supplies a broad disclosure that describes a significantly large number of available aliphatic (meth)acrylate compounds and a correspondingly broad process for obtaining such compounds, however, Betz et al. never mention Applicants' specifically defined process for preparing specific aliphatic urethane (meth)acrylates utilized for preparing UV curable clear/sealing coatings having outstanding flexibility and scratch resistance.

With respect to the flexibility aspect, as indicated in the specification of Betz et al., the flexibility of the clear lacquers taught by Betz et al. need to be further improved. In addition, the specification of their application further indicates that the clear lacquers taught by Betz et al. have "a relatively high content of low or non-volatile high reactive thinners which, after application of the clear lacquers, can lead to an undesirable partial dissolution of the base lacquer coats resulting in deviations in colour or effect." Nothing disclosed in Betz et al., however, indicates how the clear/sealing lacquer used in a process for coating over either a base lacquer/clear lacquer two-coat lacquer, or a multi-coat lacquer should be prepared so as to achieve a clear/sealing lacquer that is both scratch resistant and flexible, and yet does not cause colour and effect deviations of the coating by causing the base lacquer coats over which such a clear/sealing coat is coated to dissolve. High amounts of reactive diluents may lead to some dissolution of a base coat thereby resulting in color/effect deviation. Moreover, high amounts of reactive diluents results in a less flexible radiation cured coating since the reactive diluents, due to being small molecules with a high relative proportion of olefinic double bonds, allow for high cross-linking density. However, if the cross-linking density is too high, coatings become inflexible or brittle. Accordingly, Applicant's respectfully request that the Examiner withdraw this rejection.

Furthermore, Applicants respectfully believe that Betz et al. disclose coating compositions containing one or more radiation curable binders and/or one or more reactive diluents, optionally with one or more photoinitiators. Betz et al. disclose, as examples of binders, urethane acrylates. As the Examiner has noted, Betz et al. disclose that urethane meth(acrylates) can be made by reacting some of the isocyanate groups of a diisocyanate or polyisocyanate with a hydroxyalkyl ester and then reacting the remaining isocyanate groups with a chain extender, and cites the European counterpart of Bishop et al. for such methods. However, neither Betz et al., nor the disclosures of Bishop et al. relied upon by Betz et al. and cited by the Examiner, disclose or suggest any aliphatic urethane (meth)acrylate having an average (meth)acryloyl functionality of 3 to 4.5 and a calculated molecular mass of at least 826, or any process parameters for forming any aliphatic urethane (meth)acrylate having the recited characteristics. Following the teachings of Betz et al., one skilled in the art would find the resulting binder to have a less dense cross-

linking structure (as a consequence of not having an average (meth)acryloyl functionality of 3 to 4.5) than the branched components having a high density of cross-linking structures claimed according to the present invention. Utilizing binders having a less dense cross-linking structure results in a coating composition having less strength than the present invention, and this strength is a key factor in both scratch and acid resistance and an essential aspect of the present invention.

Bishop et al. do not disclose, teach, or suggest an aliphatic urethane (meth)acrylate made from a polyisocyanate based on acyclic aliphatic diisocyanate having 8 carbon atoms, or a polyol, or a combination of a polyol and polyisocyanate based on an acyclic aliphatic diisocyanate having 8 carbon atoms, as required by the present claims. Instead Bishop et al. disclose only a linear acrylate-terminated polyurethane oligomer, which is, by definition, difunctional. As a result, when view in combination, Betz et al. and Bishop et al. teach linear molecules. Moreover, Bishop et al. are not dealing with pure polyurethane acrylate chemistry, but rather polyurethane urea molecules. In contrast, as recited in the present claims, the present invention provides lacquers that contain an aliphatic urethane (meth)acrylate having a functionality of 3 to 4.5 (indicating a high-density of cross-linking structures). The claims recite components for making the aliphatic urethane (meth)acrylate that ensure such a functionality which, as stated in the specification on page 3, lines 23-26, is essential to the present invention.

For all of these reasons, Applicants respectfully assert that Betz et al. in view of Bishop et al. does not teach or suggest the present invention to a person of ordinary skill in the art, and thus, not rendered obvious. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

Claims 11, 14, and 16-18 stand as rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,261,645 (Betz et al.) in view of U.S. Patent 4,609,718 (Bishop et al.), which corresponds to EP 204161, further in view of U.S. Patent 4,666,783 (Heil et al.).

Applicants believe that those arguments set forth above are relevant to this rejection and are hereby reiterated.

Furthermore, Applicants respectfully disagree with the combination of the teachings of Heil et al. with those of Betz et al. and/or Bishop et al. As previously noted, Applicants do not believe that a person of ordinary skill in the art, reading the art related to lacquer coatings made from diisocyanates or polyisocyanates, would find any motivation to look to Heil et al. The subject matter of Heil et al. is directed to magnetic recording media. Heil et al. is directed to polymers for matrices for magnetic layers, and a person of ordinary skill in the art would not expect such polymers to have properties that make them advantageous as lacquer coatings, particularly in the automotive industry where such coating are constantly exposed to corrosive and scratch-imparting environmental elements. Therefore, Applicants submit that there would be no motivation for a person of ordinary skill in the art to combine the disclosures of Heil et al. with those of Betz et al. and/or Bishop et al.

Additionally, Applicants respectfully assert that there is no motivation to combine Heil et al. with either Betz et al. or Bishop et al. As Section 2143.01 of the MPEP indicates, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” As noted above, Heil et al. is directed at magnetic recording media comprising a non-magnetic base and one or more magnetic layers consisting of an organic binder matrix that contains, among other things, a polyurethane acrylate polymer; whereas Betz et al. is directed at producing scratch resistant coatings that are suitable as clear coats/topcoats for the production of a multicoat finish, especially in the automotive sector (see column 2, line 61 to column 3, line 4), and Bishop is directed at producing a buffer coating composition for coating optical glass fiber (see abstract). As previously noted, Applicants have been unable to find a single disclosure by Betz et al., Bishop et al., or Heil et al. that provides any motivation for combining the references in the manner asserted by the Examiner; Applicants respectfully re-assert that the Examiner has failed to establish a *prima facie* case of obviousness. Thus, Applicants previously respectfully requested that the Examiner identify the portions of each reference that allegedly provide the requisite motivation for combining the references. Applicants have not yet received any such indication from the Examiner and Applicants again respectfully requests that the Examiner identify those relevant portions of the references regarding the motivation for their combination.

Furthermore, Applicants respectfully re-assert that the Examiner used hindsight reconstruction to arrive at Applicants' claimed invention. In fact, Applicants believe that the requisite motivation for combining Betz et al., Bishop et al., and Heil et al. is not coming from the references themselves, but rather from Applicants' specification. Indeed, it appears as if the Examiner, in direct contravention of the statutory mandate of § 103 requiring obviousness to be judged at the point in time when the invention was made, is using Applicants' disclosure as a blueprint to reconstruct their claimed invention from isolated pieces of Betz, Bishop and Heil. See, *Grain Processing Coro. v. Am. Maize-Prods. Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988).

The Examiner's use of hindsight reconstruction is evident from her attempt to piece together isolated pieces of Betz et al. and Bishop et al. with the wholly unrelated reference of Heil et al. Indeed, a person of ordinary skill in the art looking to produce a base lacquer/clear lacquer two-coat lacquering system to be used primarily to coat an automobile in accordance with Applicants' claimed invention would not logically look to a binder matrix used to form the magnetic recording media of Heil et al. because it is non-analogous art. As a result, Applicants respectfully assert that the Examiner is simply using Applicants' specification as a roadmap for backing the random disclosures of Heil et al. into the disclosures of Betz et al. and Bishop et al. so as to ultimately arrive at her destination of Applicants' claimed invention. As the Examiner's combination of Heil et al. with Betz et al. and Bishop et al. is erroneously based on isolated pieces of these references, and Betz et al. and Bishop et al. are wholly unrelated technologically or otherwise to Heil et al. (due to its non-analogous nature), the Examiner is engaging in impermissible hindsight reconstruction. As a result, the Examiner has failed to establish a *prima facie* case of obvious. Accordingly, Applicants respectfully request that the Examiner withdraw all rejections predicated on a combination of Betz et al., Bishop et al. and Heil et al.

Also, Applicants respectfully assert that Heil is non-analogous prior art, and therefore cannot form the basis for a 35 USC § 103 rejection. Indeed, section 2141.01(a) of the MPEP indicates that "[i]n order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem

with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).” What is “reasonably pertinent” is identified in section 2141.01(a) of the MPEP as being a reference, “even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals logically would have commended itself to an inventor’s attention in considering his problem.” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992).

It becomes readily apparent upon reviewing the disclosure of Heil et al., however, that it is neither in the field of automotive coatings, nor reasonably pertinent to the particular problem with which Applicants were concerned. In contrast, Heil et al. are concerned with magnetic recording media—and not producing a base lacquer/clear lacquer two-coat lacquering system in accordance with Applicants’ claimed invention.

Furthermore, Heil et al. is not reasonably pertinent to the problem with which Applicants were concerned. That is, Heil et al. would not have commended itself to the attention of Applicants.

Indeed, Heil et al. is directed to magnetic recording media comprising a non-magnetic base and one or more magnetic layers consisting of an organic binder matrix containing finely divided magnetic material. Specifically, Heil et al. is concerned with improving the electron-beam-curable binders so that a lower curing dose, and therefore less time, is needed to cure the magnetic recording media layers.

The Examiner has not yet addressed the notion that the Heil et al. reference is neither in the field of Applicants’ endeavor, nor reasonably pertinent to the particular problem with which Applicants were concerned, Applicants respectfully assert that Heil is non-analogous prior art. Accordingly, Applicants respectfully request that the Examiner withdraw all rejections predicated on these references.

SUMMARY

In view of the foregoing amendments and remarks, Applicants believe the stated grounds of rejection have been properly traversed, accommodated, or rendered moot and that a complete response has been made to the Final Office

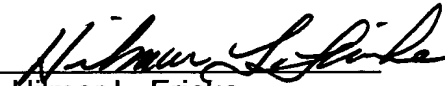
Application No. 10/089,810
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Action mailed August 2, 2004 and the Advisory Action mailed on January 12, 2005. Applicants believe that the application stands in condition for allowance with withdrawal of all grounds of rejection. A Notice of Allowance is respectfully solicited. If the Examiner has questions regarding the application or the contents of this response, the Examiner is invited to contact the undersigned at the number provided below.

The Applicants believe that no fee is due, however should any other fee be due that is unaccounted for, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company). Furthermore, if any extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefore are hereby authorized to be charged to our Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,

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